ABSTRACT

The invention is directed to the provision of a liquid crystal optical element, for correcting wavefront aberrations (principally, coma aberration and spherical aberration), that can be mounted separately from an objective lens, and an optical apparatus using such a liquid crystal optical element. The liquid crystal optical element according to the invention includes a first transparent substrate, a second transparent substrate, a liquid crystal sealed between the first and second transparent substrates, and an electrode pattern as a region for advancing or delaying the phase of a light beam and thereby correcting wavefront aberration, wherein the region is formed smaller than the field of view of the objective lens so that the region substantially stays within the field of view of the objective lens regardless of the tracking motion of tracking means.